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ABSTRACT

A study sought objective information about inservice activities for teachers and the extent to which these activities incorporated elements identified as effective through research. The focus was on the teachers who were recipients of inservice programs rather than the programs themselves. The interviews involved three school districts and two elementary schools within each district. Participants were a central office administrator from each district, principals of the schools, and six teachers from each school. Four research questions were asked: (1) How much inservice is currently received by teachers and sponsored by administrators? (2) What form do current inservice activities take, and how does this compare with recommended practice? (3) What percentage of activities are in basic skills? and (4) How effective and satisfactory is current inservice? Results are discussed within the framework of the different roles of teachers and administrators and the priorities those roles imposed upon them. Teachers perceived inservice as relevant when it was tightly coupled to actual school curriculum and instruction. Administrators loosely coupled inservice programs with needs assessment, priority goals, educational research and development, and improvement of school systems. (JD)

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The Current Status of Staff Development Activities for Teachers: A "Loose Coupling" Interpretation[1]

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1. This paper is excerpted from a longer report, "The Relationship Between Inservice Education Practices and Effectiveness of Basic Skills Instruction," by the above authors. Copies of the report can be obtained by writing: Center for Educational Policy and Management, University of Oregon, Eugene, OR 97403.

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Introduction

Cruickshank and his colleagues (1979) observed that "...inservice education research has given little attention to descriptive studies; thus we know little about what actually occurs during inservice programs" (p. 31).

The importance of descriptive research is that it provides baseline data against which recommended practices and new inservice programs can be compared. For example, suppose a new program requires extensive training of teachers over time, but we find that current practice consists primarily of brief, one-shot inservice activities. Such a finding would reveal the lack of an existing structure to support sustained inservice activity on a single priority goal.

When descriptive studies of inservice education have been done, they usually involved questionnaire surveys of teacher attitudes toward their inservice experiences. This type of research is useful, but limited. It does not yield objective information about the inservice activities in which teachers have participated, or about the extent to which the activities incorporate elements identified through research as effective. Also, previous descriptive surveys generally focus on individual inservice programs rather than on the teacher who is the recipient of inservice. Thus we know little about the inservice experiences received by individual teachers over a specified time frame. The present study was designed to yield these kinds of information about inservice education.

Research Questions

#1. How much inservice education is currently received by teachers and sponsored by administrators?

Most of the research on inservice education has consisted of studies of individual inservice programs (for example, the programs reviewed by Lawrence and Harrison, 1980). Only a few studies have looked at the individual teacher as the recipient of inservice programs. This type of study is important for two reasons. First, knowledge about a teacher's inservice activities over a period of time would indicate whether teachers focus their inservice on a few priority topics or whether they disperse their inservice efforts over a wide range of topics. Second, it would indicate the extent of variation between teachers in participation in inservice activities. Knowledge about the individual administrator's sponsorship of inservice education would be useful for the same reasons.

#2. What form do current inservice activities take, and how does this form compare with recommended practice?

Each of the inservice activities identified in the present study was described with respect to its teacher objectives, student objectives, delivery system, organizational context, and governance. This set of dimensions was derived from the systems framework developed by Joyce, Howey, and Yarger (1976). The purpose of this description was to determine current inservice practice so that it could be compared for discrepancies with recommended practices derived from research findings. Several kinds of research and research reviews were

useful for this purpose: experiments on inservice programs to improve basic skills instruction (reviewed by Gage and Giaconia, 1981); a meta-analysis of research on inservice programs (Lawrence and Harrison, 1980); and research on implementation of education programs (reviewed by Fullan and Pomfret, 1977).

#3. What percentage of current inservice activities is in the area of basic skills instruction?

This research question was of interest to us because of the recent priority of basic skills instruction in American education. Classroom research in the 1970s identified many instructional practices that correlated positively with basic skills learning, especially for young, disadvantaged students (Rosenshine, 1976). Inservice programs that trained teachers in these practices were found to change teachers' instructional behavior and to improve students' basic skills achievement. The basic skills have been viewed as a priority for educational improvement in recent reports of national commissions (for example, A Nation At Risk).

There is little research data about the extent to which basic skills inservice instruction is present in current practice. The one pertinent study that we identified (Sullivan 1981) produced these results: "A 1977-78 audit of the training program designed to improve the abilities of New York City teachers found that only 10 percent of the programs' 303 courses were related to reading and mathematics, even though pupils in the public schools were scoring significantly lower in those areas than they should...."

We need to learn whether this finding is generally true of school districts. This type of descriptive data provides a useful "mirror" for teachers and policy makers to help them determine whether current practice reflects desired practice.

#4. How effective and satisfying is current inservice education as perceived by educators?

Data about teacher and administrator perceptions are important for understanding the adaptability of inservice education to change and improvement. If educators are demonstrated to be dissatisfied with an inservice practice, policy makers may be motivated to change the practice. Conversely, if educators are satisfied with an inservice practice, policy makers may be less likely to change it even if it conflicts with a practice that is more effective.

Method

Sample

The sampling procedure involved selecting three school districts and two elementary schools within each district. A central office administrator was selected in each district (total N = 3) to represent district-level management of inservice education. Each principal of the participating schools (total N =

6) was selected to represent school-level management of inservice education. Six teachers in each school (total N = 36) were selected to represent participants in inservice education. Teacher selection in each school was stratified to include three primary teachers (grades 1-3) and three intermediate teachers (grades 4-6).

The three school districts are located in Oregon. They were selected because they represent a range of communities found in this state. District I is a mixed socioeconomic community with a preponderance of low-income families and some transient students. It is located near a major university and in an area whose economic base is agriculture and lumber. District III serves some children from low-income families, but the community as a whole is middle-class. It is located near a major metropolitan center and has a concentration of high-tech industry. District II is quite unlike the other two districts. It serves a relatively isolated coastal community with many small farming and fishing families. The district is spread over a fairly wide geographical area.

The sample of teachers is predominantly female, and the sample of administrators is with one exception male. Most of the teachers and administrators have many years of experience as professional educators.

Measures

The data collection measures in this study took the form of semi-structured interviews and checklists. Separate but related measures were developed for teachers and administrators. Except for a few slight changes in wording, the same measures were given to both types of administrator: building principal and assistant superintendent for curriculum and instruction. All of the measures were administered by trained interviewers in May and June of 1982.

Teacher Interview Schedule, Part One. The major purpose of the measure was to obtain a list of the teacher's inservice activities over a twelve-month period extending from June 1981 to May 1982. The teacher was given a definition of inservice education and then asked to recall inservice activities month to month. Pilot-testing of this procedure and experience during actual data collection indicated that teachers had no difficulty recalling their inservice activities over this period of time.

Teacher Interview Schedule, Part Two. The purpose of this measure was to obtain detailed information about each inservice activity identified in Part One of the schedule. The interview items were designed to elicit a description of what occurred with respect to 27 dimensions of inservice programs. The dimensions, listed in the left column of table 1, were derived from a review of the literature on inservice education.

Where possible, the items were phrased so that it could be determined whether the actual procedure followed under each dimension corresponded to a researched-based practice. These practices, derived from a review of the research literature, are listed in the middle column of table 1. The research source for each practice is listed in the right column of the table 1.

Teacher Interview Schedule, Part Three. After completing each section of the Part Two interview schedule, the teacher completed a corresponding rating form on Part Three. The five sections of Part Three correspond to the five sections of Part Two. The Part Three rating forms provided the basis for answering research question 4: "How effective and satisfying is current inservice education as perceived by educators?"

Administrator Interview Schedule, Part One. This interview schedule served the same functions as Teacher Interview Schedule I, Part One. The major difference is that teachers were asked to recall inservice activities in which they had participated, whereas administrators were asked to recall inservice activities that they had administered or sponsored for teachers.

Administrator Interview Schedule, Part Two. Each inservice activity sponsored by the administrator was probed using this interview schedule. Several of the items were intended to provide data for answering research question 3: "What percentage of current inservice activities is in the area of basic skills instruction?"

Results

Research Question 1

This question asked how much inservice education is currently received by teachers and sponsored by administrators.

Teachers were asked to recall the number of inservice activities in which they had participated during a twelve-month period (a summer and the following school year). An inservice activity was defined as any event, however brief or long, that is intended to improve the teacher's capacity as a professional educator.

The number of inservice activities recalled by each teacher is shown in Table 2. The mean number of activities (7.34) is much greater than that reported in previous research. There is between-district variation, but it is not substantial. The most noteworthy group difference is between the two schools in district II. The mean frequency in school 1 is twice that of school 2. The between-teacher variation is also very substantial. There is a small cluster of teachers with fewer than 5 activities and another cluster of teachers with 10 to 15 activities.

The number of teacher inservice activities sponsored or administered by principals and assistant superintendents is shown in Table 3. Most noteworthy is the fact that each administrator was involved in 4 or more. As with teachers, there was substantial variation between principals and assistant superintendents in number of activities sponsored or administered.

Number of activities is a limited index of teacher and administrator involvement in inservice education. Extent of involvement also needs to be indexed by measures of the length of the activities. Data on the number of hours required by each activity is displayed in Table 4. These data are teacher

reports of the length of each activity in which they participated.

Fully half of the inservice activities shown in Table 4 are 4 hours or less. A modest skill training program for teachers might be 30 hours or more (Borg et al. 1970). Only 11 percent of the inservice activities were of this duration or longer. A typical university course for teachers is 3 credit hours, which involves 30 contact hours with the professor plus an estimated 60 individual hours of independent study. Only 2 percnt of the inservice activities were as long as the 90 hours required for a university course that might cover one topic in depth.

The extent of participation in inservice activities was also analyzed for individual teachers. This analysis involved summing the number of hours of all the inservice activities in which a particular teacher participated. The results of this analysis are shown in Table 5. The extent of variation is large: two teachers each reported a total of only 12 hours of inservice activity, whereas two other teachers reported a total of approximately 250 hours. There is much less variation between schools, with one exception. One of the schools in district I had just one-third the number of inservice hours of any of the other schools in the sample. There is some variation when the data are aggregrated to the district level, but this variation is largely a function of the one school in district I.

Research Question 2

This question asked, what form do current inservice activities take and how does this form compare with recommended practice.

Table 6 presents descriptive results for the major dimensions assessed by the interview schedules. All of the inservice activities (N = 213) reported by the sample of teachers were pooled for this analysis. The percentage of activities that fit each descriptive category is shown in the table.

The majority of the inservice activities followed two of the effective practices shown in Table 1: the objectives were clearly and operationally stated (84%), and the inservice activities were relevant to the teachers' work (88%).

Most of the inservice activities departed from the model of inservice education suggested in Table 1. Effective inservice education, it appears, is directed toward school improvement goals that are identified through needs assessment and are concerned with improvement of student achievement, which is measured to determine whether improvement is occurring. In contrast, current inservice education activities primarily focus on the teacher's development (64% of the activities) rather than on school improvement (18%), and seldom include needs assessment (12%), reference to student achievement outcomes (7%), or assessment of student improvement (6%). The emphasis on teacher development is also seen in the percentage of voluntary inservice activities (49%). On the other hand, the fact that a high percentage of the activities included principal involvement (65%) suggests some school-level focus.

Although effective inservice practice includes readiness and follow-up procedures, only about a third of current inservice activities include them. This situation further reflects the brief, one-shot nature of current inservice shown by the results in Table 4.

Research Question 3

This question asks about the percentage of current inservice activities that are in the area of basic skills instruction.

The data used to answer this research question came from teachers' descriptions of the teacher objectives and student objectives for each inservice activity. Each description was transcribed onto a separate sheet of paper. A content analysis procedure was developed to code the inservice topics mentioned in these descriptions. A total of 18 topics were coded.

Of the 246 activities that could be content-analyzed, 210 covered a single inservice topic each. The other 36 activities covered 2 inservice topics each.

Table 7 presents the frequency and percentage of inservice activities that dealt with each topic. Six of the topics were considered to be in the area of basic skills: reading, math, language arts, handwriting, composition, and spelling. More than one-third of the inservice activities were concerned with basic skills instruction. Twenty-seven percent of the inservice activities were concerned with specific areas of the elementary school curriculum such as art, science, music, and social studies. One-third of the inservice activities dealt in a more general way with matters of elementary curriculum and instruction. Examples of topics included in this category are: classroom discipline, teaching the learning disabled, computer education, and Madeline Hunter's ITIP (Instructional Theory Into Practice) program. Finally, 17 percent of the inservice activities concerned district and school policies, and personal and professional development.

Table 8 presents the inservice topics sponsored by the principals and assistant superintendents in the sample. The topics shown in Table 8 indicate that principals and superintendents mostly sponsor inservice activities on basic skills instruction. Seventy-six percent of the inservice activities dealt totally or in part with basic skills instruction. This is double the percentage for the activities in which teachers participate (37 percent; see Table 7). Also, most of the basic skills inservice activities sponsored by administrators are in the area of language arts instruction, whereas teachers' activities are dispersed over more categories of basic skills instruction.

Research Question 4

This question asks about educators' perceptions of the effectiveness of current inservice activities and their satisfaction with it.

Table 9 presents results for several interview items that refer to this

research question. It appears that teachers are generally satisfied with the outcomes and processes of their inservice activities. Almost all teachers and administrators have a positive attitude toward inservice education.

Discussion

Recent experimental studies of inservice programs (reviewed by Gage and Giaconia, 1981) reflect a rational model of education. For example, the experiment by Good and Grouws (1979) was preceded by correlational research to discover instructional correlates of student achievement gains in elementary mathematics. In the experiment the teachers participated in an inservice program that trained them in an instructional strategy based on the correlational findings. The program was successful in helping teachers change their instructional behavior, and as a result the mathematics achievement of the teachers' students improved.

This is a rational approach to inservice education because a school improvement goal was first specified (i.e., improvement of student academic achievement). Next, means to achieve this goal were identified through empirical research. The "means" in this case were (1) an instructional strategy, and (2) an inservice program that is effective in helping teachers learn and implement the strategy.

Recent theories of educational organization posit a different model of school functions. Cohen, March and Olsen (1972) argued that schools function as organized anarchies. They have unclear and diffuse goals, uncertain technology, and uncertain outcomes. Weick (1976) further developed this model by invoking the concept of "loose coupling" to explain school functions. Loose coupling means that different roles (e.g., teacher, principal, superintendent) and functions (e.g., classroom instruction, standardized testing, inservice education, educational R & D) are loosely connected to each other. Thus, ends and means can be easily disconnected: actions by educators in one role often do not have the intended effect on the actions of educators occupying another role; such functions as inservice programs are easily dissociated from what teachers actully do in their work.

Willower (1980), among others, argued that loose coupling cannot be presumed to characterize educational organizations. Rather, empirical research must be done to determine whether particular aspects of educational organization better fit a loose coupling model or a rational model (in effect, "tight coupling").

The present results indicate that the current practice of inservice education is tightly coupled to actual school curriculum and instruction. Teachers perceive the inservice as relevant to their work, and in fact claim that they are adequately skilled in the content of many of their inservice activities even before they begin.

In other respects the current practice of inservice education forms a loosely coupled system. Inservice education is loosely coupled to assessment, priority goals, educational R&D, and improvement of schools as systems. Weick

(1976) has noted the advantages of loose coupling to maintenance of school organizations, but there are risks as well. The major risk of loosely coupled inservice programs is that they can be easily eliminated when school budgets must be trimmed. Another risk is that school improvement programs may be instituted by mandate without linking them to an inservice education process.

If this interpretation is correct, it means that much or all of current inservice education is not designed to improve student achievement or to improve the total school organization. What then is the purpose of inservice education? We can only speculate on the answer to this question here. Our hunch is that inservice education, however it is originally conceived, becomes bent to the prevailing patterns of school system functioning. Inservice education appears largely designed to be unintrusive and undemanding of teachers. It reinforces prevailing curriculum and instruction, and is not intended to alter them in a fundamental way. The focus of inservice instruction on the instructional process rather than instructional outcomes is a major indicator that it is not intended to challenge the prevailing system. Another indicator of lack of challenge is the fact that teachers feel adequately prepared in the majority of inservice activities even before the begin participation.

The findings of the study raise intriguing questions about control of inservice education. There is a great range of inservice topics across districts and across teachers. This finding suggests a voluntary view of inservice education based on individual choice both of participants and of sponsors. Half of the inservice activities require mandatory participation, though, so there does appear to be some constraint on choice. We wonder about the utility of mandatory participation, however, because there is little followup after the activities have ended and there is no mechanism for mandatory implementation of which we are aware.

The issue of control over curriculum also surfaces in our analysis of inservice content. Other data collected in the study but not reported here indicate that administrators favor use of inservice education to encourage teachers to adopt a centralized view of curriculum that is uniform across the district and articulated across grades. In practice, the majority of inservice education topics appear to focus on classroom-based aspects of curriculum that do not require articulation with larger units of school organization.

Finally, we are puzzled about the individual difference observed in the study. The largest differences are at the teacher level. There is great variation in amount and type of inservice participation across teachers. Much less variation across school districts is found, except for a few dimensions. Only a few school-level analyses were done, but these also revealed variation. What consequences do these between-district, between-school, and between-teacher variations have for students? We have no way of knowing at this time, but it does seem to be a question worth pursuing.

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TABLE 1
Summary of Research on Effective Inservice Practices for Improving Basic Skills Instruction

Dimension	Effective Practice	Basis
A. Teacher Objectives		
1. Target Competencies	Teachers should use direct instruction methods	Basic skills experiments
2. Operationalization	Inservice program should have operationally-stated objectives for teacher behavior	Implementation research
3. Complexity	If the skills to be learned are complex, phase them into the teacher's repertoire gradually	Implementation research; in service research
4. Expected level of performance	Teachers should be told specifically how much to use particular instructional behaviors	Basic skills experiments; implementation research
B. Student Objectives		
5. Target objectives	Inservice program should focus on improving student achievement in basic skills	Basic skills experiments
6. Expected level of achievement	Teachers should be helped to believe that students' basic skill achievement can be improved	Basic skills experiments; teacher expectations research
C. Delivery System		
7. Readiness activities	Hold meetings that deal with teachers' concerns about the inservice program and that build consensus agreement to participate in it	Implementation research
8. Instructional process	Teachers should study manuals describing direct instruction methods; should discuss the methods in group meetings with a trainer; and should receive observation and feedback on their behavior	Basic skills experiments; inservice research

TABLE 1
(Continued)

Dimension	Effective Practice	Basis
9. Maintenance and monitoring	Inservice program should maintain, build on, and monitor gains made in initial training	Implementation research
10. Training site	Inservice program should use the teacher's classroom as training site at least part of the time to provide observation and feedback	Basic skills experiments; inservice research
11. Trainers		
12. Scheduling	Schedule inservice sessions at times that do not interfere with teachers' other obligations	Inservice research
D. Organizational Context		
13. Purpose for participation	Inservice program should focus on school improvement rather than personal professional development	Inservice research
14. Inservice cohorts	Inservice program should provide activities that allow teachers to work with and learn from each other	Survey research
15. Concurrent organizational changes	Principal should participate in and support the teachers' inservice activities	Implementation research; research on principals' behavior
16. Other inservice activities		
Governance Structure		
17. Governance structure		

TABLE 1
(Continued)

Dimension	Effective Practice	Basis
18. Teacher participation in governance	Teachers should have opportunity to help plan the inservice program	Survey research
19. Recruitment of participants	Participation should be mandatory in order to bring about schoolwide improvement	Inservice research
20. Incentives	Provide incentives like released time, expenses, college or district credits, approval by school principal	Survey research; implementation research
21. Sanctions		
22. Costs		
Selection and Evaluation		
23. Policy	Inservice program should be selected because of its demonstrated effectiveness in improving students' basic skills achievement	Basic skills experiments
24. Needs assessment	Inservice program should be given in schools where students have been identified as low-achieving in basic skills	
25. Relevance to participants	Content of the inservice program should be relevant to the teacher's classroom situation	Survey research
26. Measurement of teacher competence	Teachers' classroom performance should be assessed to determine teacher implementation of inservice content	
27. Measurement of student objectives	Inservice program effectiveness should be assessed by measuring student performance on content-valid achievement tests and in such a way that teachers do not feel threatened	Research on achievement testing

TABLE 2
Frequency of Teacher Inservice Activities
(N = Number of inservice activities)

Teacher		District I N	District II N	District III N
School 1				
1		12	13	8
2		10	14	6
3		6	10	8
4		9	10	8
5		7	8	5
6		6	5	8
School 2				
1		13	3	2
2		8	9	8
3		15	6	7
4		4	5	5
5		6	3	4
6		5	6	8
7			4	5
School 1	M	8.33	10.00	7.17
School 2	M	8.50	5.14	5.57
District	M	8.42	7.38	6.31
	SD	3.30	3.48	1.90
Total (N=38)	M	7.34		
	SD	3.09		

TABLE 3
Frequency of Inservice Activities Sponsored by
Principals and Assistant Superintendents
(N = Number of inservice activities)

Administrator		N
District I		
Principal, School 1		4
Principal, School 2		2
Assistant Superintendent		1
District II		
Principal, School 1		3
Principal, School 2		6
Assistant Superintendent		7
District III		
Principal, School 1		4
Principal, School 2		4
Assistant Superintendent		2
Principal	M	3.83
Assistant Superintendent	M	3.33

Note: Data source is the frequency of activities recorded for Appendix F, item 12.

TABLE 4
Distribution of Durations of Teacher Inservice Activities

No. of Hours	Cum %	Bar Graph of Number of Activities
1	13%	xxxxxxxxxxxxxxxxxxxxxxxxxxx
2	34%	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
3	46%	xxxxxxxxxxxxxxxxxxxxxxxx
4	53%	xxxxxxxxxxxxxx
5	59%	xxxxxxxxxxxxx
6	66%	xxxxxxxxxxxxxxx
7	68%	xxxxx
8	74%	xxxxxxxxxxxxx
9	75%	xx
10	77%	xxxx
12	81%	xxxxxxx
13	81%	x
14	82%	x
17	82%	x
18	83%	x
20	84%	xxxx
22	85%	x
24	87%	xxxx
25	87%	x
30	89%	xxx
32	90%	xxx
34	91%	x
35	91%	x
38	92%	x
40	93%	xxx
44	94%	xx
45	94%	x
48	95%	x
53	95%	x
56	96%	x
64	97%	xx
70	97%	x
80	98%	xx
100-125	99%	xx
126-192	100%	xx

Note: Data source is Appendix C, item 18e.

TABLE 5
Number of Hours of Inservice Activity Per Teacher
Over a One-Year Period

Teacher		District I Hours	District II Hours	District III Hours
School 1				
1		90	132	83
2		256	142	88
3		12	39	20
4		40	34	124
5		40	65	147
6		19	52	29
School 2				
1		32	15	47
2		27	100	65
3		46	115	177
4		19	59	95
5		18	38	14
6		12	251	175
7			17	53
School 1	M	76.17	77.33	81.83
School 2	M	25.67	85.00	89.43
District	M	50.92	81.46	85.92
	SD	65.15	63.60	53.56
Total (N = 38)	M	73.34	Median = 46	
	SD	62.78		

Note: Data source is Appendix C, item 18e.

TABLE 6
Selected Characteristics of Current Inservice Activities

Item	Response Option	Percentage of Activities[1]
1. Were the inservice objectives clearly communicated?	Yes	84%
	No	16%
2. Were student achievement outcomes mentioned in the inservice activity?	Yes	7%
	No	93%
3. Did you participate in readiness activities prior to the inservice?	Yes	32%
	No	68%
4. Any followup activities to help you maintain or increase what you learned initially?	Yes	37%
	No	63%
5. Was your principal involved in the inservice?	Yes	65%
	No	35%
6. Purpose for participation:		
To improve myself professionally		64%
To help improve my school		11%
To help improve my school district		7%
To satisfy credential requirements		3%
Other		14%
7. My involvement in the inservice was:		
Voluntary		49%
Required		48%
Not required but felt pressure to participate		3%
8. Was this inservice selected by a formal needs assessment?	Yes	12%
	No	88%
9. Did the inservice pertain to your work as a teacher?	Yes	88%
	No	12%
10. Prior to the inservice, my knowledge/skill/attitude relating to the inservice was:		
More than adequate		14%
Adequate		49%
Less than adequate		37%
11. Were students assessed for improvement or change as a result of your participation in the inservice?	Yes	6%
	No	94%

1. The number of inservice activities in which each teacher in the sample (N = 38) participated was summed to yield a grand total (N = 213). The percentages reported in this table were based on these 213 activities, with a few exceptions because of missing data.

TABLE 7
Relative Frequency of Inservice Topics for Total Sample
(N = Number of inservice activities)

Topic	N	% *	Cum ** %
Basic Skills			
Reading	26	11%	
Math	24	10%	
Language Arts	23	9%	
Handwriting	7	3%	
Composition	5	2%	
Spelling	4	2%	
			37%
General Academic			
General Academic	59	24%	
Handicapped & Gifted	10	4%	
Management & Discipline	9	4%	
			32%
Specific Curriculum Areas			
Art	12	5%	
Career Education	5	2%	
Music	6	2%	
Mental Hygiene	3	1%	
Physical Education	12	5%	
Science	25	10%	
Social Studies	6	2%	
			27%
Professional & Personal			
Professional & Personal	28	11%	
District & School Policies	15	6%	
			17%

* The percentages are the number of activities covering a topic divided by the total number of inservice activities (N = 246).

** The cumulative percentage for each category is the number of activities covering the topic divided by the total number of inservice activities (N = 246). Occasionally an activity would cover more than one topic within a category, but their incidence is low (N = 5 or less) and would not affect the cumulative percentages. Note also that the cumulative percentages add up to more than 100 percent because there are more topics (numerator) than activities (denominator).

TABLE 8
Topics of Inservice Activities Sponsored by Principals and Assistant Superintendents

District I Topics	District II Topics	District III Topics
Principal, School 1	Principal, School 1	Principal, School 1
1. (BS) Math	1. (BS) Math	1. (BS) Language Arts
2. (BS) Language arts	2. (BS) Language Arts	2. (BS) Language Arts
3. (BS) Language arts*	3. (BS) Language Arts	3. (PP) Professional and Personal
4. (SC) Mental Hygiene*		
Principal, School 2	Principal, School 2	Principal, School 2
1. (SC) Music	1. (BS) Language Arts	1. (BS) Language Arts
2. (SC) Mental Hygiene	2. (BS) Language Arts	2. (BS) Language Arts
	3. (BS) Composition	3. (PP) Professional and Personal
	4. (GA) Handicapped and Gifted	
	5. (SC) Art	
Asst. Superintendent	Asst. Superintendent	Asst. Superintendent
1. (BS) Language Arts	1. (BS) Language Arts	1. (BS) Math
	2. (BS) Composition	2. (BS) Language Arts
	3. (BS) Language Arts*	
	3. (GA) Handicapped and Gifted*	
	3. (SC) Physical Education*	

Note: BS = basic skills; GA = general academic; SC = specific curriculum area; PP = professional and personal.

*There are inservice activities in which more than one inservice topic was covered.

TABLE 9

Educators' Perceptions of Their Inservice Activities

Item	Reponse Option	Percentage of Sample[1]
1. Effects of the inservice on my competence as a teacher.	Positive effects	75%
	Negative effects	2%
	None	23%
2. Satisfaction with what I was supposed to learn from the activity.	Satisfied	85%
	Dissatisfied	15%
3. Satisfaction with intended effects of the inservice on my students.	Satisfied	73%
	Dissatisfied	11%
	Not applicable	16%
4. Teachers' attitude toward inservice education.	Positive	85%
	Neutral	9%
	Negative	6%
5. Administrators' attitude toward inservice education for teachers.	Positive	100%
	Neutral	0%
	Negative	0%

1. The sample for the first three items is the number of inservice activities (N = 13) experienced by teachers. The sample for item 4 is the number of interviewed teachers (N = 34) who responded to this item. The sample for item 5 is the number of interviewed administrators (N = 9).